

10/628,509

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(FILE 'HOME' ENTERED AT 12:17:36 ON 21 NOV 2005)

FILE 'CAPLUS' ENTERED AT 12:19:06 ON 21 NOV 2005

L1 2272 S ((PACKED(2W)BED) (3W)REACTOR)/IA  
L2 47736 S STRIPPING/IA  
L3 230347 S ALCOHOL/IA  
ACT FAME/Q

L4 QUE (FATTY(2W)ESTER#)/IA

L5 39216 S L4  
L6 1943 S L3(4W)L3  
L7 11 S L2(4W)L3  
L8 0 S L7 AND L1  
L9 10 S L2 AND L1  
L10 0 S L2 AND L1 AND L3

FILE 'STNGUIDE' ENTERED AT 12:23:32 ON 21 NOV 2005

FILE 'CAPLUS' ENTERED AT 12:46:35 ON 21 NOV 2005  
L11 12 S ((PACKED(2W)BED) (3W)STRIPPING?)/IA

FILE 'STNGUIDE' ENTERED AT 12:48:37 ON 21 NOV 2005

FILE 'HOME' ENTERED AT 12:48:51 ON 21 NOV 2005

FILE 'USPATFULL' ENTERED AT 12:49:48 ON 21 NOV 2005  
L12 8 S ((PACKED(2W)BED) (3W)STRIPPING?)

L12 ANSWER 1 OF 8 USPATFULL on STN

ACCESSION NUMBER: 2005:27253 USPATFULL  
TITLE: Method for removal of unreacted alcohol from reaction  
mixture of ester product with rotating packed beds  
INVENTOR(S): Liu, Wen-Tzong, Hsinchu, TAIWAN, PROVINCE OF CHINA  
Lin, Chia-Chang, Hsinchu, TAIWAN, PROVINCE OF CHINA  
Yang, Sheng, Hsinchu, TAIWAN, PROVINCE OF CHINA  
Ho, Tsung-Jen, Hsinchu, TAIWAN, PROVINCE OF CHINA  
Yu, Hua-Tang, Hsinchu, TAIWAN, PROVINCE OF CHINA  
PATENT ASSIGNEE(S): Industrial Technology Research Institute, Hsinchu,  
TAIWAN, PROVINCE OF CHINA (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005022666	A1	20050203
APPLICATION INFO.:	US 2003-628509	A1	20030729 (10)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	BACON & THOMAS, PLLC, 625 SLATERS LANE, FOURTH FLOOR, ALEXANDRIA, VA, 22314		
NUMBER OF CLAIMS:	10		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	1 Drawing Page(s)		
LINE COUNT:	295		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is used to remove an unreacted alcohol from an ester product mixture by a gas stripping. The method involves the feeding of the ester product mixture into proximity of an axis of a rotating packed bed, so as to enable the ester product mixture to flow radially to come in contact with a gas which is introduced into the rotating packed bed. The

10/628,509

unreacted alcohol and any other volatile component of low molecular weight are thus stripped from the ester product mixture by the gas entrainment, thereby resulting in production of a purified ester product which is collected at the bottom of the rotating packed bed. The unreacted alcohol and the volatile component, which are entrained in the gas, are discharged via an exit located at the top of the rotating packed bed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 2 OF 8 USPATFULL on STN

ACCESSION NUMBER: 2004:206698 USPATFULL  
TITLE: Multiple reflux stream hydrocarbon recovery process  
INVENTOR(S): Patel, Sanjiv N., Sugar Land, TX, UNITED STATES  
Foglietta, Jorge H., Missouri City, TX, UNITED STATES  
PATENT ASSIGNEE(S): ABB Lummus Global Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004159122	A1	20040819
APPLICATION INFO.:	US 2004-756196	A1	20040113 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-440538P	20030116 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BRACEWELL & PATTERSON, LLP, IP DOCKETING, P.O. BOX 61389, HOUSTON, TX, 77208-1389	
NUMBER OF CLAIMS:	26	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	7 Drawing Page(s)	
LINE COUNT:	1045	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An ethane recovery process utilizing multiple reflux streams is provided. Feed gas is cooled, partially condensed, and separated into a first liquid stream and a first vapor stream. First liquid stream is expanded and sent to a demethanizer. First vapor stream is split into a first and a second separator vapor streams. First separator vapor stream is expanded and sent to demethanizer. Second separator vapor stream is partially condensed and is separated into a reflux separator liquid stream, which is sent to demethanizer, and a reflux separator vapor stream, which is condensed and sent to demethanizer. Demethanizer produces a tower bottom stream containing a substantial amount ethane and heavier components, and a tower overhead stream containing a substantial amount remaining lighter components and forms a residue gas stream. A portion of residue gas stream is cooled, condensed, and sent to the demethanizer tower as top reflux stream.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 3 OF 8 USPATFULL on STN

ACCESSION NUMBER: 2002:301523 USPATFULL  
TITLE: Apparatus and method for removing and fractionating sorbates from sorbents  
INVENTOR(S): Dai, Xiangfeng, Bakersfield, CA, UNITED STATES  
Simpson, Kevin, Bakersfield, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002169068	A1	20021114
	US 6726746	B2	20040427
APPLICATION INFO.:	US 2001-37788	A1	20011019 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-241709P	20001019 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MYERS, DAWES & ANDRAS LLP, Suite 1150, 19900 MacArthur Blvd., Irvine, CA, 92612	
NUMBER OF CLAIMS:	24	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	6 Drawing Page(s)	
LINE COUNT:	472	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for removing a first sorbate having a first desorption activation energy and a second sorbate having a second desorption activation energy from a sorbent, involves a two-stage desorber. In a first stage, the first sorbate, second sorbate and the sorbent are contacted with a stripping fluid having a first temperature sufficient to separate the first sorbate in a vapor phase from the sorbent. In a second stage, the second sorbate and the sorbent is heated to a second temperature higher than the first temperature to separate the second sorbate in a vapor phase from the sorbent. The second sorbate can then be condensed to a liquid phase and sold to offset the costs of the process. Heating in the second phase can be facilitated by the introduction of microwave or infrared energy for stripping the second sorbate from the sorbent. Use of the microwave or infrared energy can be facilitated with a purging gas which can also be heated to function as a stripping gas. An associated apparatus includes two desorption chambers or alternatively a single desorption chamber for use in both stages.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 4 OF 8 USPATFULL on STN

ACCESSION NUMBER:	2002:194534	USPATFULL
TITLE:	Production of feed liquors for sodium carbonate crystallization processes	
INVENTOR(S):	Smith, David E., Princeton, NJ, United States Copenhafer, William C., Yardley, PA, United States Chastain, Richard W., Lyman, WY, United States	
PATENT ASSIGNEE(S):	FMC Wyoming Corporation, Philadelphia, PA, United States (U.S. corporation)	

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6428759	B1	20020806
APPLICATION INFO.:	US 2000-563485		20000502 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Bos, Steven		
LEGAL REPRESENTATIVE:	TraskBritt		
NUMBER OF CLAIMS:	25		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Figure(s); 3 Drawing Page(s)		
LINE COUNT:	750		

AB A process is disclosed for converting dilute brines of sodium carbonate and sodium bicarbonate to form feed solutions from which sodium based chemicals may be recovered. The sodium bicarbonate in a dilute brine is neutralized and the brine then fortified with calcined trona to form a feed liquor concentrated in sodium carbonate from which sodium based chemicals may be recovered in a Monohydrate or other crystallization process.

10/628,509

L12 ANSWER 5 OF 8 USPATFULL on STN

ACCESSION NUMBER: 2002:181313 USPATFULL  
TITLE: Column gas-liquid contacting apparatus and its use thereof  
INVENTOR(S): Shimoi, Yoichi, Kanagawa, JAPAN  
Goda, Junichi, Kanagawa, JAPAN  
Adachi, Takio, Saitama, JAPAN  
PATENT ASSIGNEE(S): Nittetu Chemical Engineering Ltd., Tokyo, JAPAN  
(non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6423235	B1	20020723
APPLICATION INFO.:	US 2000-570928		20000515 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1999-267579	19990818
	JP 1999-338321	19991025
	JP 2000-104078	20000218

DOCUMENT TYPE: Utility  
FILE SEGMENT: GRANTED  
PRIMARY EXAMINER: Hoey, Betsey Morrison  
LEGAL REPRESENTATIVE: Oblon, Spivak, McClelland, Maier & Neustadt, P.C.  
NUMBER OF CLAIMS: 21  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 4 Drawing Page(s)  
LINE COUNT: 1571

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A gas-liquid contacting apparatus of a column system, comprising a column having an inlet for introducing a liquid to be treated and an outlet for a discharged gas in an upper part thereof, and an inlet for introducing a gas and an outlet for a treated liquid after gas-liquid contact in a lower part thereof, and at least two units comprising a packing material or a wetted wall structure, said units being separated by a gas back mixing preventer plate between the upper and lower parts, wherein the liquid introduced and the gas introduced are brought into countercurrent contact while keeping the gas phase as a continuous phase; and a process for producing an ozone liquid, a process for oxidizing an organic substance in a liquid, a process for removing a gas dissolved in a liquid, a process for treating a volatile substance in a liquid, a process for dissolving a gas into a liquid, each using the same.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 6 OF 8 USPATFULL on STN

ACCESSION NUMBER: 92:59663 USPATFULL  
TITLE: Submerged rotating heat exchanger-reactor  
INVENTOR(S): Volland, Craig S., 5615 Kenwood, Kansas City, MO,  
United States 64110

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5132090		19920721
APPLICATION INFO.:	US 1990-521830		19900508 (7)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1987-91600, filed on 31 Aug 1987, now abandoned which is a division of Ser. No. US 1986-866876, filed on 23 May 1986, now patented, Pat. No. US 4693304 which is a continuation-in-part of Ser. No. US 1985-766648, filed on 19 May 1985, now patented, Pat. No. US 4613409		
DOCUMENT TYPE:	Utility		

FILE SEGMENT: Granted  
 PRIMARY EXAMINER: Johnston, Jill A.  
 LEGAL REPRESENTATIVE: Dressler, Goldsmith, Shore, Sutker & Milnamow, Ltd.  
 NUMBER OF CLAIMS: 14  
 EXEMPLARY CLAIM: 1  
 NUMBER OF DRAWINGS: 11 Drawing Figure(s); 4 Drawing Page(s)  
 LINE COUNT: 813

AB An apparatus transfers heat for the purpose of purifying raw feed liquid, separating dissolved gases from liquids, vaporizing heat transfer fluids or containing and regulating biological/chemical reactions. The feed liquid is directed into an evaporator module submerged in a solar pond or other body of heated liquid. The evaporator module includes a rotating housing through which a plurality of spaced apart substantially horizontal open ended heat transfer tubes extend. A heating liquid is directed through the heat transfer tubes. The feedwater is distributed within the evaporator module so as to cause the feedwater to descend into heat transferring contact with the heat transfer tubes and thereby vaporize a portion of the feedwater. A preferred embodiment of the evaporator module is disclosed which includes cavitation fins for urging the heated liquid through the evaporator module.

L12 ANSWER 7 OF 8 USPATFULL on STN

ACCESSION NUMBER: 89:9082 USPATFULL  
 TITLE: Method for stripping of residual solvent  
 INVENTOR(S): Mehlberg, Robert L., Wheaton, IL, United States  
 PATENT ASSIGNEE(S): Amoco Corporation, Chicago, IL, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4802975		19890207
APPLICATION INFO.:	US 1987-82085		19870805 (7)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1985-758339, filed on 24 Jul 1985, now abandoned And Ser. No. US 1984-594755, filed on 29 Mar 1984, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Pal, Asok		
NUMBER OF CLAIMS:	22		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	4 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	525		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for stripping adsorbed organic solvent from a solid comprising feeding a slurry of the solid containing the adsorbed solvent into a packed column and countercurrently contacting the slurry with stripping gas, removing an overhead stream comprising desorbed solvent and a bottom stream comprising a solvent stripped solids slurry. A preferred embodiment uses a vertical packed column, an aqueous slurry of the solid, and steam as the stripping gas. The method is particularly suitable for stripping extraction solvents from spent tar sands or spent diatomite resulting from bitumen extraction methods.

The vertical **packed-bed stripping** column has two separate zones: (a) a hot stripping zone where the feed enters at the top and the hot stripping gas enters at the bottom of the hot stripping zone; (b) and a cold stripping zone where the depleted feed from the hot stripping zone enters at the top and a cold stripping gas is introduced at the bottom of the cold stripping zone. The lower stripping zone is maintained at a temperature less than the upper zone of the same stripping column.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L12 ANSWER 8 OF 8 USPATFULL on STN

ACCESSION NUMBER: 83:47880 USPATFULL  
TITLE: Multi-zone conversion process and reactor assembly for heavy hydrocarbon feedstocks  
INVENTOR(S): Liss, Barry, New York, NY, United States  
Calderon, Michael, Spotswood, NJ, United States  
Rakow, Marvin S., East Brunswick, NJ, United States  
PATENT ASSIGNEE(S): HRI, Inc., Lawrenceville, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 4410420		19831018
APPLICATION INFO.:	US 1982-339277		19820115 (6)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Davis, Curtis R.		
ASSISTANT EXAMINER:	Caldarola, Glenn A.		
LEGAL REPRESENTATIVE:	Mallare, V. A., Wilson, F. A.		
NUMBER OF CLAIMS:	14		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	2 Drawing Figure(s); 1 Drawing Page(s)		
LINE COUNT:	550		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A multi-zone fluidized bed hydrocarbon conversion process and apparatus for producing gas and distillable liquid products from heavy hydrocarbon feedstocks. The feedstock is introduced into an upper fluidized bed primary cracking zone maintained at temperature of 850°-1400° F. for cracking reactions therein, and resulting tars and coke are deposited on and within a particulate carrier material contained therein. The carrier material containing said tars and coke descends successively through a stripping zone to remove tars and an interim controlled temperature zone for secondary cracking against an upflowing hot reducing gas, then descends into a lower fluidized bed gasification zone. The gasification zone is maintained at temperature of 1600°-1900° F. by oxygen-containing gas and steam introduced therein to gasify the coke deposits and produce the reducing gas. The stripping zone contains a stationary packing material such as coarse particulate packing which is supported by a refractory apertured grid, or an ordered array of multiple structural members. The decoked hot particulate carrier material is recirculated upwardly through a transfer conduit to the upper fluidized bed primary cracking zone by a transport gas. Hydrocarbon liquid and gas products are withdrawn from the upper cracking zone.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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